

What is Claimed Is:

1. A method for generating a persistent storage system, the method comprising the steps of:

receiving as input an entity definition;

5 automatically generating a persistent storage structure for a persistent storage medium using the entity definition; and

automatically generating an interface for accessing the persistent storage medium.

10 2. The method of claim 1, wherein the entity definition comprises a declaration of an object, one or more properties of the object, and a data type for each property.

3. The method of claim 1, wherein the persistent storage structure comprises a database table.

15 4. The method of claim 1, wherein the persistent storage structure comprises a file directory.

5. The method of claim 1, wherein the persistent storage medium comprises a hard disk, a readable/writeable CD or a floppy disk.

6. The method of claim 1, wherein the method is implemented in a database system.

7. The method of claim 6, wherein the database system is a relational database.

5        8. The method of claim 1, wherein the step of automatically generating an interface for accessing the persistent storage medium comprises automatically creating methods for one of storing, retrieving, searching, and removing entity instance data in the persistent storage  
10       medium.

9. The method of claim 1, further comprising the step of automatically generating an index to persistent stored data.

15       10. The method of claim 1, wherein the step of automatically generating an index to persistent stored data comprises generating an index to persistent stored data that is frequently accessed as determined by a predefined indicator.

11. The method of 1, further comprising the step of automatically adapting the persistent storage structure or the access interface for a new entity definition.

12. The method of claim 1, further comprising the step  
5 of automatically optimizing the persistent storage system to improve search efficiency or storage scalability.

13. The method of claim 1, further comprising  
automatically creating a cache memory for storing an entity  
instance that is accessed from the persistent storage  
10 medium.

14. The method of claim 1, further comprising the  
steps of:

receiving an entity instance declaration; and  
automatically populating the persistent storage  
15 structure with entity instance data.

15. A program storage device readable by a machine,  
tangibly embodying a program of instructions executable by  
the machine to perform method steps for generating a  
persistent storage system, the method comprising the steps  
20 of:

receiving as input an entity definition;  
automatically generating a persistent storage structure  
for a persistent storage medium using the entity definition;  
and

5        automatically generating an interface for accessing the  
persistent storage medium.

16. The program storage device of claim 15, wherein  
the entity definition comprises a declaration of an object,  
one or more properties of the object, and a data type for  
10 each property.

17. The program storage device of claim 15, wherein  
the persistent storage structure comprises a database table.

18. The program storage device of claim 15, wherein  
the persistent storage structure comprises a file directory.

15        19. The program storage device of claim 15, wherein  
the instructions for automatically generating an interface  
for accessing the persistent storage medium comprise  
instructions for automatically creating methods for one of  
storing, retrieving, searching, and removing entity instance  
20 data in the persistent storage medium.

20. The program storage device of claim 15, further comprising instructions for automatically generating an index to persistent stored data.

21. The program storage device of claim 20, wherein  
5 the instructions for automatically generating an index to persistent stored data comprise instructions for generating an index to persistent stored data that is frequently accessed as determined by a predefined indicator.

22. The program storage device of claim 15, further  
10 comprising instructions for automatically adapting the persistent storage structure or the access interface for a new entity definition.

23. The program storage device of claim 15, further comprising instructions for automatically optimizing the  
15 persistent storage system to improve search efficiency or storage scalability.

24. The program storage device of claim 15, further comprising instructions for automatically creating a cache

memory for storing an entity instance that is accessed from the persistent storage medium.

25. The program storage device of claim 15, further comprising instructions for performing the steps of:

5       receiving an entity instance declaration; and  
          automatically populating the persistent storage structure with entity instance data.

26. A persistent storage system, comprising:  
          an interface for receiving and processing an entity  
10       definition; and

          a utility module for automatically configuring an autonomous persistent storage system in accordance with the processed entity definition,

          wherein the autonomous persistent storage system is  
15       automatically configured to comprise:

          a module for automatically generating a persistent storage structure for a persistent storage medium using the entity definition; and

          an access interface for invoking access methods  
20       for accessing the persistent storage medium.

27. A database system comprising the persistent storage system of claim 26.

28. An enterprise application comprising the persistent storage system of claim 26.

5        29. The system of claim 26, wherein the persistent storage structure comprises a database table.

30. The system of claim 26, wherein the persistent storage structure comprises a file directory.

31. The system of claim 26, wherein the access methods  
10        comprise methods for one of storing, retrieving, searching, and removing entity instance data in the persistent storage medium.

32. The system of claim 26, wherein the autonomous persistent storage system is an electronic catalog system.

15        33. The system of claim 26, wherein the autonomous persistent storage system further comprises an index creation module for automatically generating an index to persistent stored data.

34. The system of claim 26, wherein the autonomous persistent storage system further comprises a cache memory module for automatically storing an entity instance that is accessed from the persistent storage medium.

5        35. The system of claim 26, wherein the autonomous persistent storage system further comprises means for automatically populating a persistent storage structure with entity instance data that is input to the system.

10       36. An e-service that implements the system of claim 26 for providing a data management service based on a fee agreement or service level agreement.